

finger in turning. Around this irregular and lenticular body the stamens are arranged with one at each narrow edge and two midway upon each side. The two stamens at the edges have each two lobes, while the other four are half stamens. Each pair of half stamens has the two anthers, that is, half anthers, so placed together as to seem like a single stamen. However, each has its filament, which starts from a higher point upon the receptacle than the full-sized stamen and then arches considerably below it. This is particularly evident in *Dicentra spectabilis*. When the petals are removed the stamens and pistil together have somewhat the appearance of a Jew's-harp. Each bow consists of a single whole stamen filament and the filament of a half stamen upon each side.

Transverse sections through the capitate stigma reveals the fact that there are, in addition to the large protuberances upon the edge of the stigma, a number of small ones over the sides of these protuberances. As the transverse sections show, these small projections extend into the cavities of the dehisced anthers, and as the flower matures the stamens draw down, due to the peculiar arched shape of the filaments or from the prolongation of the style, or both. As a result, the rough surface of the stigma becomes the portion bearing the pollen at the time when the flower is ready for the visitation of insects.—BYRON D. HALSTED, *Rutgers College, New Brunswick, N. J.*

**Erysimum cheiranthoides.**—This crucifer, not listed in the Michigan catalogue of Wheeler and Smith, I found June 28, 1888, quite abundant on low, muddy ground, near the Au Sable river, Grayling. Although not far from a road, it appeared to be indigenous.

Prof. L. H. Bailey found it growing near Lansing about ten years ago.

C. K. Dodge found it near Port Huron last season, also.

These are the only known localities in the state.—G. H. HICKS, *Owosso, Mich.*

---

## EDITORIAL.

AMERICANS are progressive. They do not fail to remind themselves of the fact often, and in the reiteration quite lose sight of the progress made by the rest of the world in lines little or not at all developed in this country. Why we have almost no botanical gardens, while in Europe all large institutions for higher education and many large cities consider them essential to full prosperity, is worth considering. It is not solely because we are a young nation, for Australia has gardens established in the early days of the colonies which, under the fostering care of municipal governments, have become spots of rare loveliness, and according to the estimate of the people are as useful and profitable as they are attract-

ive. The most notable of the few gardens in our own country is that at Cambridge, and it would be a pertinent inquiry as to what share of credit the garden is entitled in the ascendancy of Harvard University, especially as a school of science. But the Cambridge garden has never attempted to advance economic interests or to furnish diversion for visitors; its finances have not permitted such expansion. For some time past the subject of a botanic garden for New York city has been agitated, and with encouraging results. Several of the New York dailies, with medical, gardening and other journals, have advocated it. The movement is, as it should be, under the direction of the Torrey Botanical Club. Besides creating a strong public opinion in its favor, the club has secured the passage of a resolution by the commissioners of public parks for setting aside a suitable piece of ground in one of the new parks, provided a proper endowment fund be obtained within two years. The club considers one million dollars the minimum amount required. To those who know something of the cost of foreign gardens of this sort, the sum will seem small enough. The new garden at Strassburg cost \$225,000, and it comes far from being adequate to the needs of a great city like New York. The success of this movement means not only a valuable acquisition for the city and the people who have the opportunity of visiting it, but a great boon to American botanical science. The Torrey Club is entitled to all the support in this great undertaking her fellow botanists can render.

---

## CURRENT LITERATURE.

---

### **Peach Yellows.**

The large handbooks of plant diseases by the German authors, Frank and Sorauer, present a remarkable array of maladies in the vegetable kingdom, far exceeding the number most persons would suppose possible. But, of the numerous diseases so far recognized, only a very small part has received adequate study, and the number for which acceptable remedies or preventives can be confidently prescribed is astonishingly small. The German works referred to are the only comprehensive treatises of the kind yet published, and still they do not include some of the most prominent and destructive diseases which trouble the American cultivator.

The increasing attention given to the subject in this country, by the cultivator on the one hand, in recognizing the value of the work already done, and by the investigator on the other hand, in more thorough study, particularly of the distinctively American maladies, present a hopeful outlook for this branch of applied science.

Of the strictly American plant diseases probably none has had more prominence, proved so unmanageable and has so effectively baffled all at-